ENGINEERING MANAGEMENT (EM)

EM 404 (s) Special Topics
Credit arranged.

EM 502 (s) Directed Study
Credit arranged.

EM 504 (s) Special Topics
Credit arranged.

EM 510 Engineering and Technology Management Fundamentals
3 credits
Cross-listed with TM 510.
Fundamental principles of engineering management addressing management theory applied to the engineering environment; management processes and techniques; attitudes that facilitate the leadership role of the engineering manager in an engineering organization; team-taught by business and engineering faculty.
Prereq: Permission.

EM 550 Process Improvement Methods
3 credits
This course will examine a framework for delivering dramatic and sustained continuous improvement results through the integration of improvement methodologies such as Lean Six Sigma and Design for Lean Six Sigma (DFLSS).

EM 560 Project Risk Management
3 credits
Application of project risk assessment tools and techniques that help increase the probability of project success. Discover different approaches used by commercial and federal agencies to identify, assess, and quantify risks and their impacts on projects.
Prereq: Instructor Permission.

EM 570 Global Product Development
3 credits
Discussion of topics related to enabling effective global product development spanning the entire product development cycle from strategy development, through project execution, and ultimately post release product support. Rather than presenting a fixed methodology, this course will provide a framework for global development that can be adapted to specific environments.

EM 580 Technical Project Management
3 credits
Traditional project management approaches are typically structured around the five PMBOK (Project Management Book of Knowledge) process groups. This course will introduce the PMBOK process groups but then discuss five different project management life cycle (PMLC) models to manage a project. The topics discussed are appropriate for new project managers but also for experienced project managers who are looking to increase their awareness and improve their skills in differing PMLC models.

EM 582 Advanced Topics in Project Management
3 credits
Discussion and application of advanced project management topics beyond those prescribed by traditional project management approaches. Example topics include project portfolio management, multi-project management, use of Theory of Constraints (TOC) and Critical Chain approaches to drive improved results, and application of Agile practices. These approaches should be applicable to a wide variety of industries and functions.
Prereq: EM 580 or Instructor Permission.

EM 596 Capstone Integration
1 credit
Capstone integration of degree material in Engineering Management and comprehensive final exam.
Prereq: Permission.

EM 599 (s) Non-thesis Master's Research
Credit arranged
Research not directly related to a thesis or dissertation.
Prereq: Permission.